

## DEPARTMENT OF TRANSPORTATION

Research and Special Programs  
Administration

## 49 CFR Parts 171, 172, 173, and 175

[Docket No. HM-184; Amendment Nos. 171-69, 172-77, 173-160, 175-25]

Implementation of the ICAO Technical  
Instructions**AGENCY:** Materials Transportation Bureau (MTB), Research and Special Programs Administration, Department of Transportation.**ACTION:** Final rule.**SUMMARY:** This document amends the Hazardous Materials Regulations in order to permit the offering, acceptance and transportation by aircraft, and by motor vehicle incident to transportation by aircraft, of hazardous materials shipments conforming to the provisions of the International Civil Aviation Organization's (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions). These amendments are necessary to facilitate continued shipment of hazardous materials in international commerce by air when the ICAO Technical Instructions become effective on January 1, 1983, pursuant to decisions taken by the ICAO Council regarding implementation of Annex 18 of the Convention on International Civil Aviation.**EFFECTIVE DATE:** January 1, 1983. The Director of the Federal Register approves the incorporation by reference of the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air, DOC 9284-AN/905, 1983 edition, effective on January 1, 1983.**FOR FURTHER INFORMATION CONTACT:** Edward A. Altemos, International Standards Coordinator, Materials Transportation Bureau, Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590. Telephone: (202) 426-0656.**SUPPLEMENTARY INFORMATION:** On August 2, 1982, the MTB published a notice (Docket HM-184; Notice 82-9) in the Federal Register (47 FR 33295) which requested public comment on the need to amend the Hazardous Materials Regulations (HMR) in order to take account of the ICAO Technical Instructions which become effective on January 1, 1983. Background concerning the implementation of the ICAO Technical Instructions on a worldwide basis pursuant to Annex 18 of the Convention on International Civil

Aviation (Chicago Convention), and the potential implications of their implementation with respect to hazardous materials shipments being imported into or exported from the United States by air, were discussed in the preamble to that notice.

Under these amendments hazardous materials will be allowed to be shipped, under certain conditions and limitations specified in § 171.11, when packaged in accordance with the ICAO Technical Instructions. In July 1982, a working group of the ICAO Dangerous Goods Panel met to review in detail the packaging provisions for hazardous materials in the ICAO Technical Instructions. In the course of this review, some difficulties regarding the compatibility of certain hazardous materials with authorized packagings were discovered and corrected. These corrections will be incorporated into the 1984 edition of the ICAO Technical Instructions. In the interim, the MTB must emphasize to users of the ICAO Technical Instructions that under the packaging provisions of the Technical Instructions there is a general requirement that any packaging material in direct contact with a hazardous material must be resistant to any chemical or other action of the hazardous material that could reduce the effectiveness of the packaging. This provision appears in paragraph 1.1.3 of Part 3, Chapter 1 of the ICAO Technical Instructions. Therefore, no packaging is considered to comply with the ICAO Technical Instructions unless this general requirement is fulfilled. Shippers of hazardous materials must be cognizant of this, and the other general packing requirements in the ICAO Technical Instructions, when determining the acceptability of packagings for use pursuant to the ICAO Technical Instructions.

Twenty-two commenters responded to Notice 82-9. Based on the comments received, the proposals contained therein are being adopted with certain changes, as final amendments to the HMR. All commenters expressed general support for the proposals. Other significant comments and the actions taken thereon are discussed by general subject area, or in the analysis by section, in the following paragraphs.

A number of commenters submitted general comments related to differences between the HMR and the ICAO Technical Instructions regarding classification, labeling, marking and identification numbers assigned to particular hazardous materials. One commenter went so far as to suggest that MTB replace the Hazardous Materials Table in § 172.101 with the ICAO Table. The MTB is aware of these

differences, and it is because of these differences that the MTB believed it necessary to propose amendments that would allow optional compliance with the ICAO Technical Instructions. However, because of the intermodal nature of the basic DOT classification system and the Hazardous Materials Table in § 172.101, and in view of the relatively small quantity of hazardous materials transported by air as compared to the other modes of transport, the MTB does not believe that amendments to § 172.101 or the basic DOT classification, marking and labeling system can be supported solely on the basis of conflicts with the ICAO Technical Instructions. Therefore, comments of that nature received in response to Notice 82-9 are considered to be outside of the scope of this rulemaking. Interested persons desiring to propose amendments to the DOT system of classification or to § 172.101 are invited to petition for such changes.

One commenter felt that, under the proposals, a shipper or carrier " . . . would be required to adhere to the stricter of the DOT or ICAO standards, in those circumstances in which the requirements under the two systems differ." This statement is incorrect since, to the extent that the ICAO Technical Instructions have been incorporated by reference into § 171.11, compliance with the ICAO Technical Instructions with regard to packaging, marking, labeling, classification, description and certification on shipping papers and quantity limitations would be permitted as an alternative to compliance with the corresponding requirements in the HMR.

Two commenters discussed the potential recognition of the International Air Transport Association (IATA) Dangerous Goods Regulations in the HMR. One suggested that the IATA regulations should be allowed to be used as the "source" of the ICAO Technical Instructions by incorporating the IATA regulations by reference into the HMR. The other commenter noted that only the ICAO standards should be recognized since ICAO is an intergovernmental body and, therefore, the ICAO Instructions would not include commercial variations that could be adopted by IATA. Having already noted several differences between the ICAO Technical Instructions and the 24th edition of the IATA Dangerous Goods Regulations, the MTB agrees with the latter commenter. Therefore, the IATA Dangerous Goods Regulations will not be incorporated by reference in the HMR.

A commenter expressed concern for the potential impact of the notice on domestic air transportation, especially with respect to ORM-D materials. He

urged MTB to make every effort to preserve existing classifications such as ORM-D " " " in the accommodation of international codes that are as yet untested." The MTB appreciates the concerns of this commenter and notes that under the amendments published in this document the existing DOT classification system, including ORM-D, is preserved, and that hazardous materials may be offered and accepted for transportation by air in accordance with this classification system.

One air carrier requested that MTB adopt the 1973 edition of the International Atomic Energy Agency (IAEA) regulations concerning the transport of radioactive materials. This has already been proposed under Docket No. HM-160 and a final rule is expected to be published in the near future. Therefore, no changes have been made in this amendment as a result of the comment.

MTB's attention was drawn to the fact that there are many hazardous materials and UN numbers listed in the ICAO Technical Instructions that are not listed in the Emergency Response Guide (ERG). The MTB is aware of this situation and consideration will be given to adding these entries to the next edition of the ERG. Also, the Chemical Transportation Emergency Center (CHEMTREC), which is referenced in the ERG, will be notified concerning the UN numbers that are not presently listed.

In addition to these general comments, a number of commenters suggested specific changes to individual sections of the proposed rule. These comments, and the actions taken in response to them, are summarized in the following review by sections:

**Section 171.2** No change to the proposed rule.

**Section 171.7** An error in the proposed rule concerning the numbering of the paragraphs to be added has been corrected.

**Section 171.8** No change to the proposed rule.

**Section 171.11** Several questions have been raised concerning the applicability of this section to transportation by motor vehicle. It is intended that this section apply to the transportation by motor vehicle of hazardous materials that have been or will be transported transported by air. Transportation by motor vehicle need not be immediately incident to the air transportation. For example, a consignee receiving hazardous materials transported by air under the provisions of § 171.11 may reconsign the shipment to another party by motor vehicle under the provisions of this section. In such cases, it is not intended that the

shipment be repackaged, remarked or relabeled to conform to DOT requirements applying solely to carriage by motor vehicle in domestic transportation.

When shipments of hazardous materials are transported by motor vehicle under the provisions of § 171.11, it is intended that the requirements of Subpart F of Part 172 concerning placarding of the motor vehicle will still apply. However, in such cases the placard for the DOT class required by § 171.11 (d)(4)(i) that is shown on the shipping paper must be applied. This will be the placard for the DOT class most closely corresponding to the ICAO class. In order to clarify the intent that placarding is required for transportation by motor vehicle, paragraph (d)(4) of this section has been revised to make specific reference to Subpart F of Part 172. In addition, in order to assist emergency response and enforcement personnel, a new paragraph (d)(4)(iii) has been added recommending that shipping papers used for transportation by motor vehicle contain an indication that the shipment is being made pursuant to § 171.11.

Several commenters were not clear as to whether the prohibition in proposed paragraph (c) applied only to materials prohibited from being offered or accepted for transportation, as indicated by the word "Forbidden" in Column (3) of the Hazardous Materials Table in § 172.101, or whether it also applied to materials forbidden for transportation aboard passenger or cargo carrying aircraft as indicated in Column (6) of the table. Paragraph (c) has been reworded to clarify that it applies only to those materials forbidden from being offered or accepted for transportation by any mode, as indicated by the word "Forbidden" in Column (3) of the Table.

Four commenters responded to the proposed § 171.11(d)(1) suggesting that the HMR exempt hazardous substances from regulation when transported by air. Due to the requirement of Section 306 (a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (PL 96-510) regarding the transportation of hazardous substances, the MTB cannot provide for such an exemption in the HMR and no change has been made concerning the applicability of the HMR to hazardous substances in air transport. In response to another comment, the wording of paragraph (d)(1)(i) has been revised to make it more consistent with the wording of paragraph (d)(1)(ii).

Two commenters requested clarification regarding the materials to which paragraph (d)(3) would apply. Examples of such materials include hazardous substances, hazardous wastes and combustible liquids with a

flashpoint above 60.5 ° C when shipped in packagings of greater than 110 gallons capacity. A proposal that these materials be listed in paragraph (d)(3) has not been adopted because the MTB believes such a listing to be unnecessary.

A number of comments were received concerning proposed paragraphs (d)(4) and (d)(5). Two commenters suggested that neither of these paragraphs were necessary for safety and that they imposed an administrative burden and should, therefore, be deleted. The MTB disagrees and believes that, on the basis of comments submitted under Docket No. HM-126, there is widespread support for inclusion of this information on shipping papers. Two commenters suggested that paragraph (d)(5) should be altered so that it applies to materials meeting the criteria for ICAO Division 6.1, Packing Group I or II. Because of the differences between these criteria and the DOT definition of a Poison B, this suggestion has not been incorporated into the final rule. Finally, two commenters felt that inclusion of the word "Poison" on shipping papers for air transport was redundant since the ICAO class number "6.1" would already be shown as either the classification or as a subsidiary risk and suggested that addition of the word "Poison" should only be required for transportation by motor vehicle. The MTB agrees with this comment and has amended paragraph (d)(5) accordingly.

In response to three comments received, proposed paragraph (d)(6) of this section has been amended to clarify the fact that ICAO class or division numbers are not considered abbreviations and may, therefore, be used. This paragraph has been redesignated paragraph (d)(7) in the final rule and, as a result of a number of questions raised concerning the applicability of the proposed § 171.11 to shipments of radioactive materials, a new paragraph (d)(6) has been included to highlight the special requirements that would apply to shipments of radioactive materials.

**Section 172.101** A section reference in the Hazardous Materials Table to the exception for transporting wet electric storage batteries with wheel chairs has been revised as a consequence of changes made elsewhere in this amendment.

**Section 172.401** No change to the proposed rule.

**Section 172.446 and 172.448** Two comments were received objecting to the proposal to allow depletion of stocks existing on January 1, 1983, of the Magnetized Material and Cargo Aircraft Only labels, particularly for international transportation. The MTE believes that it is unreasonable to

require immediate change to a new label format and, therefore, has retained the provision in question.

**Section 172.504** Although no change was proposed to this section, two commenters suggested modifications to the placarding requirements contained therein. One commenter suggested that a separate paragraph concerning the placarding of aircraft freight containers should be included to avoid any differences with the ICAO system. The MTB believes such a paragraph is unnecessary since the provision of paragraph (b) of this section, which allows such freight containers to be labeled in accordance with § 172.406(e)(3), provides for consistency with the ICAO system. The second commenter proposed that this section be modified to allow " " " the details of the hazardous class of materials contained within a container to be entered on the pallet tag " " " This suggestion has not been incorporated into the final rule since it would be inconsistent with current ICAO provisions which specifically require the display of hazard class labels on freight containers, as opposed to "details of the hazardous class of materials" on pallet tags.

**Section 175.3** No substantial change to the proposed rule.

**Section 175.10** Two commenters objected to the change proposed to paragraph (a)(5) of this section, one noting that the 10 pound limitation on small arms ammunition in checked baggage would be inconsistent with section 107(c), of the Hazardous Materials Transportation Act (49 U.S.C. 1806(c)). The MTB agrees with these commenters and has withdrawn the proposed amendment to this paragraph.

Two commenters noted that, since toilet articles are already addressed in paragraph (a)(4) of this section, the probable intent of proposed paragraph (a)(16) of this section was to allow perfumes and colognes purchased through duty free sales to be carried as carry-on baggage. They requested that this intent be clarified in the text of the paragraph. The MTB agrees, and paragraph (a)(16) has been reworded accordingly.

A commenter suggested that the proposed paragraph (a)(17) be combined with existing paragraph (a)(13) since both deal with exceptions for dry ice. The MTB believes it is preferable to leave the two provisions in separate paragraphs since the former paragraph addresses carriage of dry ice as a refrigerant for cargo and provides certain marking requirements whereas the latter paragraph concerns dry ice for use in cabin service or as a refrigerant in

carry-on baggage. The commenter also requested that the figure four pounds in paragraph (a)(17) be changed to two kilograms to insure consistency with the ICAO Technical Instructions. The MTB believes this is unnecessary since the existing § 173.26 allows the use of two kilograms as the metric equivalent to four pounds.

At the request of a commenter, paragraph (a)(19) has been revised to include a cross reference to the definition of non-spillable battery that is contained in § 173.260(d).

**Section 175.30** A suggestion to revise paragraph (b) of this section to provide that the preloading inspection may be conducted by an agent of the operator has not been incorporated in the final rule. The MTB believes this is unnecessary since an agent of the operator is authorized to perform the inspection required in this paragraph. Although no change was proposed to paragraph (d) of this section, a commenter requested that "refrigerating machines" be added to the list of hazardous materials excepted from the provisions of § 175.30 (a) and (b). The MTB considers this request to be outside of the scope of this rulemaking and no change has been made to this paragraph.

A commenter suggested deletion or revision of proposed paragraph (e)(1) of this section in order to improve clarity. The MTB believes the proposed text is clear and, in order to provide consistency with the text appearing in the ICAO Technical Instructions, has retained the proposed text. The commenter also suggested that the word "packagings" should be replaced by "packages" in subparagraphs (e)(2) and (e)(3). The MTB agrees with this change with regard to subparagraph (e)(2), but believes that "packagings" is the correct term in paragraph (e)(3) and has retained the proposed text of that subparagraph.

**Section 175.33** A commenter suggested minor revisions to the proposed text of subparagraphs (a) (2), (4) and (5) of this section in order to improve clarity. The MTB has retained the text as proposed for paragraph (a)(2) in order to maintain consistency with similar text in § 172.203, but has added the words "(if applicable)" in subparagraph (a)(4) and changed the word "may" to "must" in subparagraph (a)(5), as requested by the commenter. In addition, subparagraph (a)(5) has been editorially revised to clarify its intent.

**Section 175.35** Two commenters noted that the proposal to delete this section is inconsistent with the ICAO Technical Instructions which require a copy of the shipping paper to accompany the shipment. The MTB agrees with these commenters and

§ 175.35 is retained.

**Section 175.75** Five commenters requested that the quantity limitations imposed in subparagraph (a)(2) of this section be deleted. Because no change was proposed to this paragraph in the notice, the MTB considers the deletion of this paragraph to be outside of the scope of this rulemaking and the paragraph has, therefore, been retained. Nevertheless, the MTB believes that there may be merit in considering the deletion or amendment of this limitation provided evidence supporting such action is supplied and that full public participation in this action is insured. Consequently, petitions to delete or amend § 175.75(a)(2), with full supporting information, are invited for consideration in a separate rulemaking action.

**Section 175.78** Two commenters noted an inconsistency between the segregation specified in Table 1 and that required under the ICAO Technical Instructions, and requested that Table 1 be modified to remove this inconsistency. The MTB agrees that Table 1 should be consistent with ICAO requirements and the Table has been modified accordingly. Another commenter suggested that "Blasting Agents" be added to Table 1 with the same segregation required for oxidizers. The MTB agrees that Blasting Agents should be added to this Table, but since they would be classified by ICAO under Division 1.5, they have been added to the entry for explosives in the Table. As a consequence of this action, existing paragraph (b) is unnecessary and has been removed.

**Section 175.79** No change to the proposed rule.

**Section 175.81** No substantial change to the proposed rule.

**Section 175.85** A commenter requested that paragraph (c)(1)(v) of this section, which provides an exception from the accessibility requirements for certain flammable liquids, be amended to include the upper limit of liquid flashpoint to which the exception applies. The MTB believes this is unnecessary since the upper liquid flashpoint limit to which provisions concerning flammable liquids apply is already clearly stated in the definition of a flammable liquid contained in § 173.115. The commenter also requested clarification as to whether the list in paragraph (c)(1) pertains only to the hazard class of materials or whether it also applies to subsidiary risks. It is intended that this list pertain only to hazard class and not to subsidiary risks.

Another commenter suggested that paragraph (c)(1)(v) be modified by including an exception for flammable liquids meeting the definition of another hazard class in order to make this

provision consistent with the corresponding provision of the ICAO Technical Instructions. The MTB agrees with this comment and has excepted flammable liquids meeting the definition of another hazard class from the provisions of paragraph (c)(1)(v). This commenter also requested that the list of materials in paragraph (c)(1), that are excepted from the accessibility requirement, be expanded to include ORM materials, noting that this would be consistent with the proposed inclusion of ICAO Class 9 materials in the list. The MTB agrees with this comment in principle, and has added ORM-A, C, D and E materials to the list. ORM-B has not been added since these materials would be classified as corrosives by ICAO and as such would be subject to the accessibility requirement.

*Section 175.88* No substantial change to the proposed rule.

*Section 175.90* No substantial change to the proposed rule.

*Section 175.305* No change to the proposed rule.

*Section 175.320* A commenter requested clarification as to whether proposed new paragraph (b)(10) should also be included in Part 107. The MTB believes this is unnecessary since Part 107 deals with the DOT approval of a shipment while the proposed new paragraph deals with a potential requirement for foreign approval of a shipment. The same commenter queried whether proposed paragraph (b)(10) could, in some cases, be more stringent than ICAO by requiring a foreign approval for the shipment of certain materials which are not subject to regulation under the ICAO Technical Instructions. Upon reexamination, the MTB believes this could be the case. Therefore, the wording of paragraph (b)(10) has been revised to make it precautionary.

*Section 175.630* A commenter supported the proposed amendment to this section which would limit the ability to transport etiologic agents in the same compartment with foodstuffs, feed or other edible material. However, he suggested that this rule would be undermined unless the MTB prohibited the transportation of etiologic agents in mail bags or required that postal authorities appropriately label mail bags containing etiologic agents. The MTB believes such action to be unnecessary since diagnostic specimens, biological products and etiologic agents in quantities of less than 50 milliliters are excepted by paragraph 173.386(d) provided certain packaging

requirements are met.

*Section 175.701* No change to the proposed rule.

*Section 175.705* No change to the proposed rule.

#### List of Subjects

##### 49 CFR Part 171

Hazardous materials transportation, Incorporation by reference.

##### 49 CFR Part 172

Hazardous materials transportation, Labeling, Packaging and containers.

##### 49 CFR Part 173

Hazardous materials transportation, Packaging and containers.

##### 49 CFR Part 175

Hazardous materials transportation, Air carriers.

In consideration of the foregoing, 49 CFR Parts 171, 172, 173 and 175 is amended as follows:

#### PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

1. In § 171.2, paragraph (a) is amended by adding “§ 171.11,” before “§§ 171.12 and 176.11”.

2. In § 171.7, new paragraphs (c)(31) and (d)(27) are added to read as follows:

##### § 171.7 Matter incorporated by reference.

\* \* \*

(c) \* \* \*

(31) ICAO: International Civil Aviation Organization, P.O. Box 400, Place de l'Aviation Internationale, 1000 Sherbrooke Street West, Montreal, Quebec, Canada H3A 2R2. ICAO Technical Instructions available from INTEREG, International Regulations Publishing and Distribution Organization, P.O. Box 60105, Chicago, Illinois 60660.

(d) \* \* \*

(27) International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air, DOC 9284-AN/905 (ICAO Technical Instructions), 1983 edition.

3. In § 171.8 new definitions for “ICAO” and “Unit load device” are added in appropriate alphabetical order to read as follows:

##### § 171.8 Definition and abbreviations.

\* \* \*

“ICAO” means International Civil Aviation Organization.

\* \* \*

“Unit load device” means any type of freight container, aircraft container, aircraft pallet with a net, or aircraft

pallet with a net over an igloo.

4. A new § 171.11 is added to read as follows:

##### § 171.11 Use of ICAO Technical Instructions.

Notwithstanding the requirements of Parts 172 and 173 of this subchapter, a hazardous material may be transported by aircraft, and by motor vehicle either before or after being transported by aircraft, in accordance with the ICAO Technical Instructions if the hazardous material—

(a) Is packaged, marked, labeled, classified, described and certified on a shipping paper and otherwise in a condition for shipment as required by the ICAO Technical Instructions;

(b) Is within the quantity limits prescribed for transportation by either passenger-carrying or cargo aircraft, as appropriate, as specified in the ICAO Technical Instructions;

(c) Is not a forbidden material or package according to § 173.21 or Column (3) of the Table to § 172.101 of this subchapter; and,

(d) Fulfills the following additional requirements as applicable:

(1) When a hazardous material, which is subject to the requirements of the ICAO Technical Instructions, is also a hazardous substance as defined in this subchapter—

(i) The name of the hazardous substance shall be entered on shipping papers in association with the basic description, and in association with the proper shipping name required to be marked on the package, unless the proper shipping name required by the ICAO Technical Instructions already includes the name of the hazardous substance; and

(ii) The letters “RQ” shall be entered on the shipping paper either before or after the basic description required by the ICAO Technical Instructions and in association with the proper shipping name required to be marked on the package.

(2) When a hazardous material, which is subject to the requirements of the ICAO Technical Instructions, is also a hazardous waste as defined in this subchapter—

(i) The word “Waste” must precede the proper shipping name on shipping papers and package markings; and

(ii) It must comply with § 172.205 with respect to the hazardous waste manifests.

(3) When a hazardous material is not subject to the requirements of the ICAO Technical Instructions, it must be transported as required by this subchapter.

(4) When a hazardous material is transported under the provisions of this section by motor vehicle on a public highway, the motor vehicle must be placarded in accordance with Subpart F of Part 172 of this subchapter and the shipping paper must include—

(i) The name of the DOT hazard class most closely corresponding to the ICAO class in association with the basic description required by the ICAO Technical Instructions unless the proper shipping name contains the key word or words of the hazard class of the material;

(ii) The words "Dangerous When Wet" in association with the basic description when the Class 4, Division 4.3 label is required to be applied by the ICAO Technical Instructions; and

(iii) Should include an indication that the shipment is being made under the provisions of this section or the letters "ICAO."

(5) If a liquid or solid material in a package meets the definition of a poison according to this subchapter, and the fact that it is a poison is not disclosed in the shipping name or by a class entry, an indication that the material is a poison shall be entered on the shipping paper in association with the basic description. For transportation by motor vehicle, this indication must be made by entering the word "Poison" on the shipping paper in association with the basic description.

(6) For radioactive materials—

(i) Shipping papers for large quantity radioactive materials shipments must meet the requirements of § 172.203(d)(1)(iii) of this subchapter.

(ii) Competent authority certification and any necessary revalidation for Type B and fissile materials packages must be obtained from the appropriate authorities as specified in § 173.393b of this subchapter, and all requirements of the certificates and revalidations must be met.

(iii) The provisions of §§ 172.204(c)(4), 173.393 (p), (q) and (r)(3) of this subchapter apply.

(iv) Limited quantities of radioactive materials must meet the provisions of § 173.391 of this subchapter and require shipping papers when transported by public highway, and

(v) Except as provided in § 171.12(e), Type A package contents shall be limited in accordance with § 173.389(1).

(7) Abbreviations may not be used in shipping paper entries or package markings unless they are specifically authorized by this subchapter. ICAO class or division numbers are not

considered to be abbreviations.

## **PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS**

5. The Hazardous Materials Table in § 172.101 is amended by changing the section reference "175.305" in column (5)(b) for the entry "Battery, electric storage, wet, with wheelchair" to "175.10".

6. Section 172.401 is amended by replacing the word "or" in paragraph (c)(1) with a semicolon, by replacing the period at the end of paragraph (c)(2) with "; or," and by adding a new paragraph (c)(3) to read as follows:

§ 172.401 **Prohibited labeling.**

(c) \* \* \*

(3) The ICAO Technical Instructions.

7. In § 172.440, paragraph (a) is amended by removing the words "including the label name in the lower border", the figure of the MAGNETIZED MATERIAL label is amended by removing the words "MAGNETIZED MATERIAL LABEL" in the lower right corner of the border of the label and a new paragraph (c) is added to read as follows:

§ 172.440 **MAGNETIZED MATERIAL label.**

(c) MAGNETIZED MATERIAL labels with the text "MAGNETIZED MATERIAL LABEL" shown in the lower right corner of the label may continue to be used until stocks existing on January 1, 1983, are depleted.

8. In § 172.448, paragraph (a) revised and a new paragraph (c) is added to read as follows:

§ 172.448 **CARGO AIRCRAFT ONLY label.**

(a) Except for size and color, the CARGO AIRCRAFT ONLY label must be as follows:



(c) CARGO AIRCRAFT ONLY labels with the text "DANGER-PELIGRO" may continue to be used until stocks existing on January 1, 1983, are depleted.

## **PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS**

§ 173.250 [Amended]

9. In § 173.250, paragraph (b) is amended by changing "§ 175.305" to read "§ 175.10".

## **PART 175—CARRIAGE BY AIRCRAFT**

10. Section 175.3 is revised to read as follows:

§ 175.3 **Unacceptable hazardous materials shipments.**

Hazardous materials that are not prepared for shipment in accordance with this subchapter may not be accepted for transportation or transported aboard an aircraft.

In § 175.10, new paragraphs (a)(15) through (a)(20) are added to read as follows:

§ 175.10 **Exceptions.**

(a) \* \* \*

(15) Alcoholic beverages, perfumes and colognes carried aboard a passenger-carry aircraft by the operator for use or sale on the aircraft.

(16) Alcoholic beverages, perfumes and colognes, purchased through duty free sales, carried by passengers or crew as carry-on baggage.

(17) Carbon dioxide, solid (dry ice) intended for use in food and beverage service aboard aircraft and dry ice in quantities not exceeding 4 pounds per passenger when used to pack perishables in carry-on baggage.

(18) Carbon dioxide gas cylinders worn by passengers for the operation of mechanical limbs.

(19) Wheel chairs with non-spillable batteries, as defined in § 173.280(d) of this subchapter, as checked baggage, provided that the battery is disconnected, the battery terminals are insulated to prevent accidental short circuits, and the battery is securely attached to the wheel chair.

(20) Wheel chairs with spillable batteries, as checked baggage, provided that the wheel chair can be loaded, stowed, secured, and unloaded always in an upright position. The battery must be disconnected, the terminals insulated to prevent accidental short circuits, and the battery securely attached to the wheel chair. The pilot-in-command must be advised either orally or in writing of the location of the wheel chair aboard the aircraft prior to departure. If the wheel chair cannot be loaded, stowed,

secured and unloaded always in an upright position, the battery must be removed and the wheel chair may then be carried as checked baggage without restriction. The removed battery must be carried in strong, rigid, outside packaging as follows:

(i) Outside packaging must be leaktight, impervious to battery fluid, loaded aboard the aircraft in accordance with the required orientation markings and be protected against upset by securing to pallets or by securing them in cargo compartments using appropriate means of securement (other than by bracing with freight or baggage) such as by use of restraining straps, brackets or holders;

(ii) Batteries must be protected against short circuits, secured upright in their outside packaging, and surrounded by compatible absorbent material sufficient to absorb their total liquid contents; and

(iii) Outside packaging must be marked to indicate proper orientation, and with the words "Battery, wet, with wheel chair", and be labeled with a Corrosive label.

12. In § 175.30, paragraphs (a)(2) and (3) and (b) are revised and a new paragraph (e) added to read as follows:

**§ 175.30 Accepting and inspecting shipments.**

(a) \* \* \*

(2) Described and certified on a shipping paper prepared in duplicate in accordance with Subpart C of Part 172 or as authorized by § 171.11 of this subchapter. The originating aircraft operator must retain one copy of each shipping paper for 90 days;

(3) Labeled and marked in accordance with Subparts D and E of Part 172 or as authorized in § 171.11 of this subchapter, and placarded (when required) in accordance with Subpart F of Part 172 of this subchapter; and,

(b) Except as provided in paragraph (d) of this section, no person may carry a hazardous material in a package, outside container, or overpack aboard an aircraft unless the package, outside container, or overpack is inspected by the operator of the aircraft immediately before placing it:

(1) Aboard the aircraft; or,

(2) In a unit load device or on a pallet prior to loading aboard the aircraft.

(e) An overpack containing packages of hazardous materials may be accepted only if the operator has taken all reasonable steps to establish that—

(1) The overpack does not contain a package bearing the "CARGO

AIRCRAFT ONLY" label unless the overpack affords clear visibility of and easy access to the package.

(2) The proper shipping names, identification numbers, labels and special handling instructions appearing on the inside packages are clearly visible or reproduced on the outside of the overpack, and

(3) Has determined that a statement to the effect that the inside packages comply with the prescribed specifications appears on the outside of the overpack, when specification packagings are prescribed.

13. Section 175.33 is revised to read as follows:

**§ 175.33 Notification of pilot-in-command.**

(a) Except as provided in § 175.10, when a hazardous material subject to the provisions of this subchapter is carried in an aircraft, the operator of the aircraft shall provide the pilot-in-command at least the following information in writing as early as practicable prior to departure:

(1) The proper shipping name, hazard class and identification number of the material as specified in § 172.101 of this subchapter or the ICAO Technical Instructions. If a hazardous material is described by the proper shipping name, hazard class, and identification number appearing in—

(i) Section 172.101 of this subchapter, any additional description requirements provided in §§ 172.202 and 172.203 of this subchapter must also be shown in the notification.

(ii) The ICAO Technical Instructions, any additional information required to be shown on shipping papers by § 171.11 of this subchapter must also be shown in the notification.

(2) The total number of packages and the quantity of each hazardous material (except for radioactive materials) and the location of the packages aboard the aircraft;

(3) Confirmation that no damaged or leaking packages have been loaded on the aircraft;

(4) For radioactive materials, the number of packages, their category, transport index (if applicable), and their location aboard the aircraft; and

(5) Confirmation that the package must be carried on cargo aircraft only if its transportation aboard passenger-carrying aircraft is forbidden.

(b) A copy of the written notification to pilot-in-command shall be readily available to the pilot-in-command during flight.

14. In § 175.75, paragraphs (a)(1), (a)(3)(i) and (a)(3)(ii) are revised to read:

**§ 175.75 Quantity limitations aboard aircraft.**

(a) \* \* \*

(1) A hazardous material except as permitted by this subchapter:

\* \* \*

(3) \* \* \*

(i) In passenger carrying aircraft, exceeds 50.0 or, for any single package, exceeds 3.0, or

(ii) In cargo-only aircraft, exceeds 200.00 (for fissile radioactive materials, see § 175.702(b)(3)) or, for any single package, exceeds 10.0.

15. Section 175.78 is amended by revising paragraph (a) to read as follows:

**§ 175.78 Stowage compatibility of cargo.**

(a) Packages containing hazardous materials which might react dangerously with one another may not be stowed in an aircraft next to each other or in a position that would allow a dangerous interaction in the event of leakage. As a minimum, the segregation prescribed in the following Table must be maintained.

TABLE 1

	A	B	C	D	E	F	G
A Explosives and Blasting Agents or ICAO Class 1.....	Note 3.....	Note 4.....	Note 4.....	Note 4.....	Note 4.....	Note 4.....	X
B Compressed gases or ICAO Class 2.....	Note 4.....						
C Flammable liquids or ICAO Class 3.....	Note 4.....					X	
D Flammable liquids and solids (labeled SPONTANEOUSLY COMBUSTIBLE) or ICAO Division 4.2.....	Note 4.....					X	X
E Flammable solids (labeled DANGEROUS WHEN WET) or ICAO Division 4.3.....	Note 4.....					X	X
F Oxidizers or ICAO Division 5.1 and Organic peroxides or ICAO Division 5.2.....	Note 4.....		X	X	X		X
G Corrosive materials or ICAO Class 8.....	X			X	X	X	

Note 1: The letters across the top of the Table have the same meaning as the letters along the left side of the Table.  
 Note 2: An "X" at the intersection of a row and a column in the Table means that packages containing the indicated classes of hazardous materials may not be stowed next to or in contact with each other, or in a position which would allow interaction in the event of leakage of the contents.  
 Note 3: For import or export shipment, explosives other than explosives of ICAO Division 1.4, Compatibility Group S, that do not belong to the same compatibility group according to the ICAO Technical Instructions may not be stowed together.  
 Note 4: Explosives, other than safety explosives (ICAO Division 1.4, Compatibility Group S) must not be stowed together with this class.

16. Section 175.79 is revised to read as follows:

**§ 175.79 Orientation of cargo.**

(a) A package containing hazardous materials marked "THIS SIDE UP" or "THIS END UP", or with arrows to indicate the proper orientation of the package, must be stored and loaded aboard an aircraft in accordance with such markings.

(b) A package containing liquid hazardous materials not marked as indicated in paragraph (a) of this section, must be stored and loaded with closures up (other than side closures in addition to top closures).

17. A new § 175.81 is added to read as follows:

**§ 175.81 Securing of packages containing hazardous materials.**

(a) Packages containing hazardous materials must be secured in an aircraft in a manner that will prevent any movement in flight which would result in damage to or change in the orientation of the packages.

(b) Packages containing radioactive materials must be secured in a manner that insures that the separation requirements of §§ 175.701 and 175.702 will be maintained at all times during flight.

18. In § 175.85, paragraph (d) is removed and reserved, paragraphs (a), (b) and (c)(1)(i)-(iv) are revised, and (c)(1)(v)-(vii) added to read as follows:

**§ 175.85 Cargo location.**

(a) Except as provided in § 175.10, no person may carry a hazardous material subject to the requirements of this subchapter in the cabin of a passenger-carrying aircraft or on the flight deck of any aircraft. Hazardous materials may be carried in a main deck cargo compartment of a passenger-aircraft provided that the compartment is inaccessible to passengers and that it meets all certification requirements for a Class B aircraft cargo compartment as provided in 14 CFR 25.857(b).

(b) Each package containing a hazardous material acceptable only for cargo aircraft must be loaded in such a manner that a crew member or other authorized person can see, handle and when size and weight permit, separate such packages from other cargo during flight.

- (c) \* \* \*
- (1) \* \* \*
- (i) Radioactive (ICAO Class 7) materials,
- (ii) Poison B (ICAO Division 6.1) liquids and solids (except those labeled FLAMMABLE),
- (iii) Irritating (ICAO Division 6.1) materials,
- (iv) Etiologic (ICAO Division 6.2) agents,
- (v) Flammable liquids with a flashpoint above 90°F. (32°C.) that do not meet the definition of another hazardous class,
- (vi) Materials classified as Class 9 materials according to the ICAO Technical Instructions and that are being transported under that classification as provided in § 171.11 of this subchapter, and,
- (vii) ORM-A, C, D or E materials.

19. A new § 175.88 is added to read as follows:

**§ 175.88 Inspection of unit load devices.**

A unit load device may not be loaded on an aircraft unless the device has been inspected and found to be free from any evidence of leakage from, or damage to, any package containing hazardous materials.

20. Section 175.90 is revised to read as follows:

**§ 175.90 Damaged shipments.**

(a) Packages or overpacks containing hazardous materials must be inspected for damage or leakage after being unloaded from an aircraft. When packages or overpacks containing hazardous materials are carried in a unit load device, the area where the unit load device was stowed must be inspected for evidence of leakage or contamination immediately upon

removal of the unit load device from the aircraft, and the packages or overpacks inspected for evidence of damage or leakage when the unit load device is unloaded. In the event of leakage or suspected leakage, the compartment in which the package, overpack, or unit load device was carried must be inspected for contamination and any dangerous level of contamination removed.

(b) Except as provided for in § 175.700, the operator of an aircraft shall remove from the aircraft any package subject to this subchapter that appears to be damaged or leaking. In the case of a package which appears to be leaking, the operator must insure that the remainder of the packages in the same shipment are in proper condition for transport aboard the aircraft and that no other package has been contaminated.

(c) No person shall place a package that is damaged or appears to be damaged or leaking aboard an aircraft subject to this part.

(d) If a package containing an etiologic agent is found to be damaged or leaking, the person finding the package shall—

- (1) Avoid handling the package or keep handling to a minimum;
- (2) Inspect packages adjacent to the leaking package for contamination and withhold from further transportation any contaminated packages until it is ascertained that they can be safely transported;
- (3) Comply with the reporting requirement of § 171.15 of this subchapter; and
- (4) Notify the consignor or consignee.

**§ 175.305 [Amended]**

21. In § 175.305, paragraph (b) is removed.

22. In § 175.320 a new paragraph (b)(10) is added to read as follows:

**§ 175.320 Cargo-only aircraft; only means of transportation.**

- (b) \* \* \*
- (10) If the movement involves international transportation, permission



for the shipment may also be required from the appropriate authorities of the countries of origin, destination, transit and overflight prior to departure.

23. Section 175.630 is amended by revising paragraph (a) to read as follows:

**§ 175.630 Special requirements for poisons and etiologic agents.**

(a) Hazardous materials bearing the POISON or ETIOLOGIC AGENT label may not be carried in the same compartment of an aircraft with material which is marked as or known to be foodstuffs, feed, or any other edible material intended for consumption by humans or animals unless the poisons or etiologic agents and the foodstuffs, feed, or other edible material are loaded in separate unit load devices which, when stowed on the aircraft, are not adjacent to each other.

**§ 175.701 [Amended]**

24. In paragraph (b)(2) of § 175.701, the figures in the "Centimeters" and "Inches" columns for the last six entries are revised to read 290, 320, 350, 375, 400 and 425 in the "Centimeters" column and 114, 128, 138, 148, 157 and 167 in the "Inches" column, respectively.

25. A new § 175.705 is added to read:

**§ 175.705 Inspection of aircraft for contamination by radioactive materials.**

(a) Aircraft used routinely for the carriage of radioactive materials shall be periodically checked for radioactive contamination. The frequency of checks shall be related to the likelihood of contamination, and the extent to which radioactive materials are carried.

(b) An aircraft must be taken out of service if the level of contamination exceeds that provided in § 175.700(b).  
(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53 App. A to Part 1).

**Note.**—The Materials Transportation Bureau has determined that this document will not result in a "major rule" under the terms of Executive Order 12291 or a significant regulation under DOT's regulatory policy and procedures (44 FR 11034) and does not require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321, *et seq.*) I certify that this document will not have a significant economic impact on a substantial number of small entities because the overall economic impact of this document will be minimal. A regulatory evaluation and environmental assessment are available for review in the docket.

Issued in Washington D.C. on November 24, 1982.

L. D. Santman,

Director, Materials Transportation Bureau.

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